

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 6, in which reference numbers 10 and 11 are added. This sheet, which includes Fig. 6-7, replaces the original sheet including Fig. 6-7.

### **REMARKS**

This amendment is made in response to the FINAL Office Action mailed December 14, 2005. The amendment is accompanied by an RCE application. In this response, claims 14, 17, 21, 22 and 25 have been amended. Claims 15-16, 18-20 and 23-24 remain in this application. Claims 26-27 are newly added in this response.

#### **Objections to claims 14-16**

The informalities in the claim 14 are amended in accordance with the Examiner's suggestions. The Examiner indicated that in the claim 16 "a ball grid array (SBGA) like structure" should be changed to "a ball grid array (SBGA) like structure". However, Applicant believes that there is no need to make this amendment since the claim 16 recites "a super ball grid array (SBGA) like structure". Accordingly, the Applicant requests that the objections to claims 14-16 be withdrawn.

#### **Rejection Under 35 U.S.C 112 of claims 21-25**

Claims 21-25 were rejected under 35 U.S.C. 112 as allegedly failing to particularly point out and distinctly claim the subject matter, which Applicant regards as the invention.

The Examiner indicated that "In claim 21, term 'substantially similar coefficient of thermal expansion' renders the claim indefinite since it is not clear what applicant intends to cover by recitation 'substantially similar coefficient of thermal expansion'." Consequently, Applicant has amended the phrase "substantially similar" to "substantially equal" in claim 21. Therefore, it is Applicant's belief that claims 21-25 are allowable with above correction.

**Rejections Under 35 U.S.C. 102(b) of Claims 14-20**

Claims 14-20 are rejected under 35 U.S.C. 102(b) as allegedly unpatentable over Chung et al (US 2002/0056924, hereinafter "Chung"). Claim 14 is an independent claim, from which claims 15-20 depend. Applicant asserts that claim 14 is patentable for at least the reasons discussed below, and therefore for at least the same reasons claims 15-20 are patentable.

The Office Action forms the rejection by alleging that Chung discloses an integrated circuit chip package comprising a stress buffering material (insulation material 415) only covering corners of said integrated circuit chip (210).

Independent claim 14 recites:

14. An integrated circuit chip package comprising:  
an integrated circuit chip attached to a substrate;  
***a stress buffering material only covering corners of said integrated circuit chip;*** and  
an encapsulation material coating said integrated circuit chip and all of a portion of said substrate.

*(Emphasis Added)*. Applicant submits that claim 14 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

As is clearly recited in the claim, the integrated circuit chip package of claim 14 comprises a stress buffering material **only** covering corners of the integrated circuit chip.

However, as disclosed by "Chung":

**"In particular, the fabrication process removes the polyimide layer from the edge of the active area, thereby exposing a nitride layer. The insulating material 215a covers on the exposed portion of the nitride layer and extends on to the side of the semiconductor chip 210."** (text [0048] and Fig. 6a)

**"The BSG package 500 includes an insulation layer 415 on the edge 418 of the semiconductor chip 410."**

(Chung, paragraph [0061]).

Clearly, the insulating material 215a in "Chung" is formed on the edge of the semiconductor chip 210 to prevent the short resulting from the bonding wire contacting the edge of the semiconductor chip (text

0013). In contrast, the stress buffering material in claim 14 is formed only on the corners of the integrated circuit chip. However, insulation material 415 recited in Chung is formed on the edge of the semiconductor chip 410. For at least this reason, claim 14 patently defines over Chung. Moreover, Chung does not anticipate claim 14 because it does not teach or suggest a stress buffering material only covering corners of the integrated circuit chip. Accordingly, the integrated circuit chip package defined by claim 14 is patently distinct from the integrated circuit chip in Chung **since the insulation material 415 does not only exit at corners of the chip**. Reconsideration of this rejection is hereby respectfully requested.

As Chung does not teach or suggest all the limitations recited in claim 14, claim 14 is allowable over the cited reference. As claims 15-20 are dependent claims that incorporate the limitation of claim 14, these claims patently define over the cited art as well.

#### **Rejections Under 35 U.S.C. 102(b) of Claims 21-24**

Claims 21-24 were rejected under 35 U.S.C. 102(b) as allegedly unpatentable over Tomoko et al (JP 0621628A, hereinafter Tomoko). Claim 21 is independent claim, from which claims 22-24 depend. Applicant asserts that claim 21 is patentable for at least the reasons discussed below, and therefore for at least the same reasons claims 22-24 are patentable.

The Office Action asserts that Tomoko discloses an integrated chip as claim 21.

As amended, independent claim 21 recites:

21. An integrated circuit chip package comprising:  
an integrated circuit chip having a first surface and a second surface opposite thereto, wherein said second surface is attached to a substrate;  
a stress buffering material having a substantially equal coefficient of thermal expansion to said integrated circuit chip, covering at least one corner of said integrated circuit chip, **wherein a part of the first surface is not covered by the stress buffering material**; and  
an encapsulation material covering said integrated circuit chip and said stress buffering material.

*(Emphasis Added)* Applicant submits that claim 21 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

As is clearly recited in claim 21, the integrated circuit package of this claim comprises a stress buffering material covering at least one corner of the integrated circuit chip. Also, a part of the first surface of the integrated circuit chip is not covered by the stress buffering material.

However, as disclosed by Tomoko in Abstract and FIG. 1: "Before entering the assembling process, the second surface and a part of the side surface of a semiconductor chip 1 are coating material 2." As the figure shows in Tomoko, the coating material covers the whole rear surface of the semiconductor chip. Unlike claim 21, a part of the first surface of the integrated circuit chip is not covered by the stress buffering material.

Accordingly, it is obvious that the integrated circuit chip package of the invention is apparently different from the integrated circuit chip package in Tomoko since the coating material 2 covers the whole rear surface of the semiconductor chip. Reconsideration of this rejection is hereby respectfully requested.

Hence it is respectfully asserted that amended claim 21 is allowable over the cited reference (Tomoko et al). Insofar as claims 22-24 depend from amended claim 21, it is Applicant's assertion that these claims are also allowable at least by virtue of their dependency.

#### **Rejections Under 35 U.S.C. 103(a) of Claim 25**

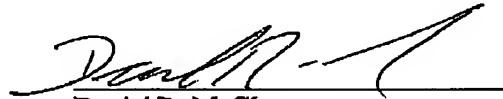
Insofar as claim 25 depends from amended claim 21, it is Applicant's belief that this claim is also allowable at least by virtue of their dependency. Reconsideration of the above rejection over claim 25 is hereby respectfully requested.

**Newly added claims 26-27**

As claims 26-27 depends from amended claim 21, these claims are also allowable at least by virtue of their dependency.

A credit card authorization is enclosed to cover the fee associated with the accompanying RCE. No additional fee is believed to be due in connection with this amendment and response. If, however, any additional fee is deemed to be payable, you are hereby authorized to charge any such fee to Deposit Account No. 20-0778.

Respectfully submitted,



Daniel R. McClure  
Registration No. 38,962

**THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.**  
Suite 1750  
100 Galleria Parkway N.W.  
Atlanta, Georgia 30339  
(770) 933-9500

Annotated Sheet Showing Changes

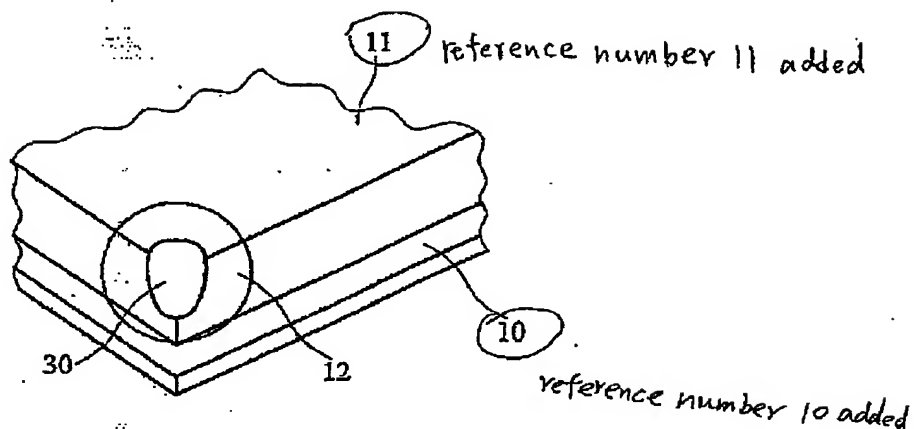


FIG. 6

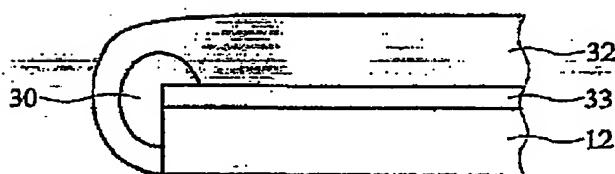


FIG. 7